



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/542,346	04/05/2000	Yi-Qun Li	2583.1002-003	6886

21005 7590 05/16/2002

HAMILTON, BROOK, SMITH & REYNOLDS, P.C.
530 VIRGINIA ROAD
P.O. BOX 9133
CONCORD, MA 01742-9133

EXAMINER

PATIDAR, JAY M

ART UNIT

PAPER NUMBER

2862

DATE MAILED: 05/16/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

MP

Office Action Summary	Application No. 09/542,346	Applicant(s) LI ET AL.	
	Examiner Jay M. Patidar	Art Unit 2862	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 February 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-33 is/are pending in the application.
- 4a) Of the above claim(s) 15, 16 and 23-29 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-14, 17-22 and 30-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>3.6</u> | 6) <input type="checkbox"/> Other: _____ |

1. This communication is in response to applicants response filed on February 26, 2002.
2. Applicant's election of 2-14,17-22,30-33 in Paper No. 13 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).
3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.
4. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.
5. The Abstract of the Disclosure is objected to because the abstract does not set forth the nature and gist of the invention.

6. Claims 2-5,13,17-22,30-32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

— In claims 2,17, the term "about" at lines 1 and 2 renders the claim indefinite. Perhaps applicant intends to say "at least" instead;

— In claim 5, it is not clear as to what is a high impedance readout circuit and how is it electrically connected to rest of the elements of the device;

— In claim 13, the matrix is not clearly defined;

— In claim 30, it is unclear as to what is meant by "connected electronically in parallel"?

— In claims 18,19, it is unclear from the language of the claim as to what response is detected by the circuit; what generates that response; where is such circuit connected; the electrical circuit as claimed is vague;

— In claim 20, it is unclear as to how rotation of the wheel induces the changing magnetic field.

The claims not specifically addressed share the indefiniteness as they depend from rejected base claims.

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2-14,17-22,30-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over GB 2188157.

'157 discloses a magnetic field sensor having a multilayered material wherein a piezoelectric material is sandwiched between magnetostrictive layers (Note figure 1, Col. 1, lines 61 +; Col. 2, lines 66-124). '157 does not specifically teach the use of this sensor device for rotary movement detection, however, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use a magnetic field sensing device for any intended purpose, since it has been held to be within the general skill of an artisan in the art to use such sensor on the basis of its suitability for the intended use as a matter of obvious design selection. It is notoriously known in the magnetic field art to use a magnetic field sensing

Art Unit: 2862

device to measure the rotational position of the encoder that changes the strength of magnetic field applied to the sensing device. Furthermore, this feature in the claims is considered a statement of an intended use and lends no patentable weight to the claims. The use of combination of different layers e.g. magnetostrictive layer between piezoelectric layers or vice versa would be within the level of ordinary skill in the art. The shape of the piezoelectric or magnetostrictive (e.g. matrix, stripes, rod etc) material/layer or use of multiple magnetic field sensors is considered a matter of design selection. The ferrite material for magnetostrictive layer is old and known in the art.

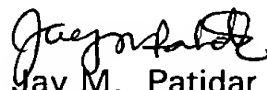
As to claim 5, it is clear from the disclosure of the reference that the sensitivity of the sensor is dependent on the area of the layers.

As to claim 6, supporting the sensor as a cantilever is considered a matter of design selection since it has been held that the provision of adjustability/suitability, where needed, involves only routine skill in the art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jay M. Patidar whose telephone number is 703-308-6723. The examiner can normally be reached on M-Thur 7:00-5:30.

The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-0956.


Jay M. Patidar
Primary Examiner
Tech Center 2862
May 15, 2002